ROLE OF CCTs IN THE EVOLVING DOMESTIC ELECTRICITY MARKET

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I. KEY POINTS AND ISSUES

(1) Panel considered the effects of deregulation of electricity markets on CCTs, with CCTs defined as greenfield and repowering technologies, in the medium to long term

(2) Full fledged consumer choice likely won't occur for at least five years, perhaps more, but there are at least two important impacts today for CCTs:

(A) Uncertainty: don't know what costs can be recovered in long run, so even more incentive (e.g., in addition to present overcapacity) to minimize new construction

(B) Huge incentive to cut costs everywhere: *any missed opportunity to reduce costs in new, deregulated environment automatically translates to lost profit (or losses instead of profit)*. Main impact of deregulation on CCTs is probably pressure to reduce construction costs

(3) Impediments to CCTs being cheapest option:

(A) Natural gas prices are low and projected to increase only slowly (EIA projects about 1% annual increase in excess of inflation through 2015);

(B) Capital costs for CCTs (and coal generally) are too high; and

(C) CCTs are still perceived as riskier than more commercial technologies, and thus may bear a risk premium

(4) Uncertainties that could affect demand for CCTs

(A) Natural gas prices can be quite variable, and uncertainty; may be mostly on the high side: despite EIA projections (and those of others) that gas wellhead prices will still be about $2.50/MMbtu in 2015, Frank Burke graphics in Panel 4 showed late December price spike at Henry Hub in Louisiana, and futures prices for natural gas in similar time frames, at about $4.75

(B) Capital costs may well be lower in deregulated environment: according to Bob Edmonds of Duke Power, Duke recently built a new coal unit for just over $1,000/KW in South Carolina (the Cope unit), several hundred $/KW less than present expectations: Edmonds cited cost-cutting lessons learned in Duke's recent experiences abroad

(C) Higher demand growth could spur need for new units, everything else equal: Mary Hutzler of EIA stated that an increase in demand growth from 1.5% to 2.0% from 1995 to 2015 would trigger a need for about 100 GW of new units, about half of them coal

(D) Lower prices due to deregulation could spur new electricity demand: Bob Edmonds stated that Duke projects internally that prices could drop between 5% to 30%, depending on treatment of stranded costs

II. SUGGESTED SOLUTIONS TO BRINGING PRECOMMERCIAL CCTs TO MARKETPLACE

A wide range of potential solutions was offered, some involving some government role or incentive, some involving only industry

(1) Solutions involving Government roles

(A) States currently undergoing, or looking at, the transition to deregulation are examining new ways to continue supporting "favored" technologies. These could include:

(I) a nonbypassable "wires" charge (such as implemented by California) to collect $ to be used to fund renewables, conservation, and R&D

(ii) a "portfolio standard" which would a require that sellers obtain a certain percentage of their power from favored technologies

(iii) regulatory requirements favorable to certain technologies, such as a requirement that nuclear units must be allowed to run anytime they are available

(B) Financial incentives, such as proposed by Dwain Spencer

(C) Incentives for overseas deployments of CCTs, in order to demonstrate them adequately by the time they are needed domestically

(D) Work with state regulators to develop some types of incentives

(E) Recognize in some way the fuel diversity benefits of coal

For any of these incentives, coal industry involvement above and beyond that of today was urged, because other entities might have other priorities than developing CCTs.

(2) Industry solutions

(A) Co-production (including tri-generation of electricity, heat, and chemicals) will bring price of electricity down

(B) Co-firing with "distressed fuels"

© Develop standardized plant, modular production, use cookie cutter approach to lower capital costs

(D) Coal sector should work together to produce an integrated project, just as the gas industry abroad has developed new gas fields in conjunction with identified power plant projects (parallel to mine-mouth units domestically?) To gain synergies

III. OUTLOOK FOR POSSIBLE ACTIONS

(1) Given the difficulty of obtaining financing from federal or state sources (due in part from rising budgets for social costs such as health care, according to Terri Moreland), it may be up to the private sector, possibly in conjunction with non-financial incentives such as portfolio standards and line charges, to bring CCTs to commercial fruition

(2) If there is to be government involvement, need to get private industry and different levels of government together to decide on a course of action. Right now, there appear to be many ideas, but little leadership.

(3) If there is to be government involvement, the lone remaining major opportunity is likely to be the legislation that will likely go forward in states the U.S. Congress to put electricity deregulation into practice